

I CLAIM:

1. A steam pressure reducing and conditioning valve for passing a superheated steam inflowing from a first port through a pressure reducing section, and supplying a mist of subcooled water and discharging cooled and decompressed vapor from a second port, wherein a nozzle for supplying said mist is provided in the proximity to said pressure reducing section, a flat nozzle injecting said mist in a planar pattern whereby the planar orientation is perpendicular to the direction of steam flows, and it is disposed a predetermined distance from said pressure reducing section.
2. The valve of claim 1, wherein the pressure reducing section has a bottom and a cylindrical form, and the mist pattern is substantially parallel to the bottom of the pressure reducing section.
3. The vapor change valve of claim 1, wherein nozzles for supplying said mist are juxtaposed longitudinally in several stages in the flow direction of steam oriented towards the second port and at least the nozzle disposed at the position nearest to the pressure reducing section is a flat nozzle.